

REMARKS

By this Amendment, Applicants propose amending claims 15, 28, and 38 to more appropriately define the present invention. Claims 15, 17-23, and 28-38 are pending in this application.

As a preliminary matter, Applicants respectfully request that the Examiner acknowledge Applicants' Information Disclosure Statement (IDS) filed April 30, 2003. To date, Applicants' have not received a copy of the PTO 1449 Form indicating the Examiner's consideration of the document cited therein.

In the Final Office Action mailed May 13, 2004, the Examiner rejected claims 15, 17-18, 22, and 38 under 35 U.S.C. § 103(a) as unpatentable over Fukuda et al. (U.S. Patent No. 6,329,991) in view of Mahler (U.S. Patent No. 4,233,631), and further in view of Priem et al. (U.S. Patent No. 5,237,650); rejected claims 20 and 21 under 35 U.S.C. § 103(a) as unpatentable over Fukuda in view of Mahler and Priem and further in view of Willan (EP 0367405); and rejected claims 28, 35, and 36 under 35 U.S.C. § 103(a) as unpatentable over Priem in view of Mahler and Fukuda and further in view of Gengler (U.S. Patent No. 5,260,695).

The Examiner also indicated claims 19, 23, 29-34, and 37 are allowed on the Office Action Summary. Applicants thank the Examiner for the indication of allowable subject matter and note that it appears the Examiner has again inadvertently included a paragraph from a prior Office Action that previously indicated that these claims were objected to (see paragraph 17 of the present Office Action). Applicants rewrote claims 19, 23, 29, and 33 in independent form in the Amendment After Final of August 13, 2003, of which Applicants requested entry in the Request for Continued Examination

(RCE) filed on September 30, 2003. Therefore, Applicants believe the Examiner allowed claims 19, 23, 29-34, and 37 per the Office Action Summaries attached to the Office Action mailed November 26, 2003, and the Final Office Action mailed May 13, 2004. Should this understanding be incorrect, Applicants respectfully request that the Examiner to clarify the status of these claims in the next Office communication.

I. REJECTION OF CLAIMS 15, 17-18, 22, and 38

Applicants respectfully traverse the rejection of claims 15, 17-18, 22, and 38 under 35 U.S.C. § 103(a) as unpatentable over Fukuda in view of Mahler and Priem. To establish a proper *prima facie* case of obviousness under 35 U.S.C. § 103(a), the Examiner must demonstrate each of three requirements. First, the reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims. See M.P.E.P. § 2143.03 (8th ed. 2001). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. See M.P.E.P. § 2143.01 (8th ed. 2001). Third, a reasonable expectation of success must exist. See M.P.E.P. § 2143.02 (8th ed. 2001). Moreover, each of these requirements must be found in the prior art, not in Applicants' disclosure. See M.P.E.P. § 2143 (8th ed. 2001).

Claim 15, as proposed to be amended, recites "a game device for displaying . . . an object moving in accordance with developments of a game" including, among other things, "trace mark drawing means for drawing a trace mark in length within a predetermined range from said present position according to a movement of said object,

said trace mark comprising a plurality of polygons, and for gradually extinguishing said trace mark starting from a rear section of said trace mark by progressively making said rear section lighter in color and moving toward a front section of said trace mark with a lapse of time, wherein said polygons toward the rear of said trace mark disappear first; said trace mark drawing means extending only a top position of said trace mark when said present position of said object is located less than a predetermined value apart from the top position of a drawn trace mark, each polygon constituting a trace mark being continuously adjacent to each other." Fukuda, Mahler, and Priem, taken alone or in combination, do not disclose or suggest at least these features.

Fukuda discloses a data processing method and apparatus that allows a user of a pen input device to input and output trace data. In one embodiment, Fukuda discloses changing the brightness of the entire trace over time. See col. 3, lines 42-44, Fig. 7, STEP 54. In another embodiment, Fukuda discloses varying the thickness of an entire trace over time. See col. 4, lines 18-22, Fig. 10, STEP 84. Fukuda, however, does not disclose or suggest "gradually extinguishing said trace mark starting from a rear section of said trace mark by progressively making said rear section lighter in color and moving toward a front section of said trace mark with a lapse of time, wherein said polygons toward the rear of said trace mark disappear first," as recited in claim 15.

In the Final Office Action, the Examiner admits that Fukuda does not disclose that the trace is composed of a plurality of polygons, but alleges that this is known in the art as taught by Mahler. It is not taught or suggested by Mahler. The Mahler system provides improved viewability of a television display when multiple successive paths of motion of an object crisscross each other. See col. 2, lines 14-21. However, Mahler

does not teach or suggest that the moving objects are polygons. Instead, Mahler is directed toward producing an output signal using a live video signal for a television display. See col. 7, lines 5-12. In the Mahler system, the input video signal may be derived from a color television camera, from a video tape recorder, a slow motion reproducer, or from a telecine apparatus. See col. 7, lines 46-52. In addition, Mahler does not disclose or suggest that "each polygon constituting a trace mark is continuously adjacent to each other," as recited in claim 15, as proposed to be amended. Accordingly, Mahler does not make up for the shortcomings of Fukuda.

The Examiner further states at page 4 of the Office Action that "it is well known in the art that a graphical object is made up of either points, lines, polygons..." Regarding the Examiner's allegation, Applicants respectfully refer the Examiner to the February 21, 2002 Memorandum from USPTO Deputy Commissioner for Patent Examination Policy, Stephen G. Kunin, regarding "Procedures for Relying on Facts Which are Not of Record as Common Knowledge or for Taking Official Notice." In relevant part, the Memorandum states, "If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding." Memorandum, p. 3. Applicants traverse the Examiner's presumed taking of "Official Notice," noting the impropriety of this action, as the Federal Circuit has "criticized the USPTO's reliance on 'basic knowledge' or 'common sense' to support an obviousness rejection, where there was no evidentiary support in the record for such a finding." *Id.* at 1. Applicants submit that "[d]eficiencies of the cited references cannot be remedied by ... general conclusions about what is " basic knowledge" or "common sense."" In re Lee,

61 USPQ2d 1430, 1432-1433 (Fed. Cir. 2002), quoting In re Zurko, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001).

Should the Examiner maintain the rejection after considering the arguments presented herein, Applicants submit that the Examiner must provide “the explicit basis on which the examiner regards the matter as subject to official notice and allow Applicants to challenge the assertion in the next reply after the Office action in which the common knowledge statement was made,” or else withdraw the rejection. *Id.* at 3 (emphasis in original).

The Examiner also alleges “it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mahler into Fukuda because Fukuda discloses a game device for displaying a fading trace and Mahler discloses the trace can be composed of polygons in order to improve visibility of the display.” See Office Action, page 4. However, Mahler does not teach improving the visibility of game device signals, nor does Mahler teach displaying polygons. Further, Fukuda discloses receiving user input from a pen input device to produce output trace data. Mahler, however, merely improves video signals from an input such as a television camera without making modifications based upon user input. Accordingly, one of ordinary skill in the art would not have been motivated to combine Fukuda and Mahler.

Nor does Priem make up for the shortcomings of Fukuda and Mahler. Priem discloses a technique used by a bit-mapped computer output display to indicate to a viewer differing depths of portions of a line or an object. The technique varies the intensity of the bits making up a line as the depth of the line increases. Fading the line’s

intensity over distance creates an effect of an image showing the line receding progressively further from a viewer. Col. 3, line 66 to col. 4, line 5. In particular, Priem teaches providing the fullest intensity at the closest location of a line and the least intensity at the farthest location from the eye. Points on the line between the beginning and end are given intensity values varying linearly between the intensities of the two end points. Col. 4, lines 7-14. In other words, Priem teaches drawing a line such that the pixels **closest** to the viewer are drawn with a **highest** intensity. The pixel intensity decreases over distance for pixels located on portions of the line that are farther away from the viewer. As a result, pixels located the **farthest** from the viewer are drawn with the **least** intensity.

However, Priem does not teach or suggest a “trace mark drawing means for drawing a trace mark in length within a predetermined range from said present position according to a movement of said object, said trace mark comprising a plurality of polygons, and for gradually extinguishing said trace mark starting from a rear section of said trace mark by progressively making said rear section lighter in color and moving toward a front section of said trace mark with a lapse of time, wherein said polygons toward the rear of said trace mark disappear first, said trace mark drawing means extending only a top position of said trace mark when said present position of said object is located less than a predetermined value apart from the top position of a drawn trace mark, each polygon constituting a trace mark being continuously adjacent to each other,” as recited in claim 15, as proposed to be amended. Because the applied references, Fukuda, Mahler, and Priem do not disclose or suggest at least these features, the Examiner should withdraw the rejection of claim 15.

Moreover, Applicants respectfully disagree that there is any motivation to combine Priem, Fukuda and Mahler. As discussed above, Fukuda teaches user input, and Mahler does not. In addition, the Mahler system teaches improving the viewability of a television signal. Priem, however, is directed to a bit-mapping computer output display used to indicate to a viewer differing depths of portions of a line or an object. Accordingly, one of skill in the art would not have been motivated to make the combination of these divergent references that the Examiner has proposed. Accordingly, the rejection is improper for at least this additional reason.

For at least the above reasons, Applicants respectfully request the Examiner to withdraw the rejection of claim 15. Claims 17, 18, and 22 depend from claim 15 and are allowable for at least the reasons described above for claim 15.

Independent claim 38, as proposed to be amended, includes recitations similar to those of claim 15. Therefore, Applicants respectfully request the Examiner to withdraw the rejection of claim 38 for at least the same reasons set forth in relation to claim 15.

II. REJECTION OF CLAIMS 20 AND 21

Applicants respectfully traverse the rejection of claims 20 and 21 under 35 U.S.C. § 103(a) as unpatentable over Fukuda, Mahler and Priem in view of Willan. Claim 20 depends from claim 15 and thus includes all of the recitations thereof. As discussed above, Fukuda, Mahler, and Priem do not teach or suggest all of the features recited in claim 15. In addition, Willan does not cure the deficiencies of Fukuda, Mahler, and Priem.

Willan teaches a computer graphics system having an input device and a means for detecting changes in the position of the input device relative to a surface (col. 1, lines 41-44). Willan further teaches a means for determining at least one derivative with respect to time of the input device position, and controlling characteristics of displayed patterns based upon the derivative (col. 1, lines 47-51). The Examiner alleges Willan teaches a graphical input system in which the "shape, width, density, texture and colour of the resultant visual effect" were determined due to velocity, acceleration or higher order derivatives, citing col. 1, line 45 to col. 2, line 3 of Willan. Willan, however, teaches relying on an input from an input device for determining a point in time to change the appearance of a particular visual effect. Willan thus requires user input to vary the appearance of a visual effect.

Accordingly, Fukuda, Mahler, Priem, and Willan, either taken alone or in combination, fail to teach or suggest a combination of elements including, at least, a "trace mark drawing means for drawing a trace mark in length within a predetermined range from said present position according to a movement of said object, said trace mark comprising a plurality of polygons, and for gradually extinguishing said trace mark starting from a rear section of said trace mark by progressively making said rear section lighter in color and moving toward a front section of said trace mark with a lapse of time, wherein said polygons toward the rear of said trace mark disappear first, said trace mark drawing means extending only a top position of said trace mark when said present position of said object is located less than a predetermined value apart from the top position of a drawn trace mark, each polygon constituting a trace mark being

continuously adjacent to each other," as recited by claim 15, as proposed to be amended, from which claim 20 depends.

Claim 21 depends from claim 20 and is allowable for at least the same reasons. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of claims 20 and 21 for at least the above reasons.

III. REJECTION OF CLAIMS 28, 35, AND 36

Applicants respectfully traverse the rejection of claims 28, 35, and 36 under 35 U.S.C. § 103(a) as unpatentable over Fukuda, Mahler, and Priem in view of Gengler.

Claim 28, as proposed to be amended, recites a combination including, among other things, a "processing and displaying means for processing and displaying a trace mark according to said object moving virtually in a three-dimensional virtual space during the processing of said game, and a past trace mark, said trace mark comprising a plurality of polygons, and for gradually extinguishing said trace mark starting from a rear section of said trace mark by progressively making said rear section lighter in color and moving toward a front section of said trace mark with a lapse of time, wherein said polygons toward the rear of said trace mark disappear first, said processing and displaying means extending only a top position of said trace mark when a present position of said object is located less than a predetermined value apart from the top position of the past trace mark, and each polygon constituting a trace mark being continuously adjacent to each other." As discussed above, Fukuda, Mahler, and Priem, taken alone or in combination, do not disclose or suggest at least these exemplary features of Applicants' claimed invention.

Furthermore, Gengler does not make up for the shortcomings of Fukuda, Mahler, and Priem. Gengler discloses a method and apparatus for subdividing a frame buffer, along window pane boundaries, into multiple images that are processed through independent color maps and blended into a single image on arbitrary window boundaries (col. 2, lines 56-62). A window refers to a region of interest in the frame buffer (col. 1, lines 62-64). The image processing provides, for example, real-time fading of one image into another or fading out an entire image (col. 5, lines 40-45). Gengler, however, does not disclose or suggest at least the above exemplary features of claim 28, as proposed to be amended. Accordingly, the Examiner should withdraw the rejection of claim 28.

Claim 35 depends from claim 28 and is allowable for at least the reasons described above for allowable claim 28. Claim 36 multiply depends from independent claims 15 and 28, which are allowable for reasons set forth above (and also depends from claims 29 and 33, which have been allowed), as well as dependent claims 17, 18, and 35, which each depend from one of those independent claims (and also depends from claims 30-32 and 34, which have been allowed).

CONCLUSION

Applicants respectfully request that the Examiner enter this Amendment under 37 C.F.R. § 1.116, placing the pending claims in condition for allowance. Applicants submit that the proposed amendments of claims 15, 28, and 38 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the Final Office Action presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that the entering of the Amendment would allow the Applicants to reply to the final rejections and place the application in condition for allowance.

Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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